SAMPLE ANALYTICAL RESULTS

EPA Monitoring Well

Identification No: SAG-01

San Mateo Creek Basin, New Mexico

Analyte	Units	EPA National Primary and Secondary Drinking Water Standards Maximum Contaminant Level (MCL)	New Mexico Water Quality Control Commission Standards for Ground Water of 10,000 mg/L TDS or Less [Human Health Standards, Other Standards for Domestic Water Supply, and Standards for Irrigation Use]	Well ID: EPA SAG-01 1/27/2016
Radiological				
Gross Alpha	pCi/L		--	101 (+/-21)
Adjusted Gross Alpha for Uranium	pCi/L	15		71.8
Gross Beta	mrem/yr	4	--	1 (+/-0.42)[a]
Radium-226	pCi/L			1.43 (+/-0.49)
Radium-228	pCi/L			1.47 (+/-0.47)
Combined Radium 226 + 228	pCi/L	5	30	2.9
Thorium-228	pCi/L	--	--	1.38 (+/-0.24)
Thorium-230	pCi/L	--	--	1.62 (+/-0.28)
Thorium-232	pCi/L	--	--	0.61 (+/-0.12)
Uranium-233/234	pCi/L	--	--	26 (+/-4.4)
Uranium-235/236	pCi/L	--	--	0.61 (+/-0.19)
Uranium-238	pCi/L	--	--	12.9 (+/-2.2)
Metals, Dissolved				
Aluminum	mg/L	--	5	45
Antimony	mg/L	--	--	ND
Arsenic	mg/L	--	0.1	0.0044
Barium	mg/L	--	1	0.25
Beryllium	mg/L	--	--	0.0042
Cadmium	mg/L	--	0.01	0.00028
Calcium	mg/L	--	--	57
Chromium	mg/L	--	0.05	0.022
Cobalt	mg/L	--	0.05	0.0073
Copper	mg/L	--	1	0.03
Iron	mg/L	--	1	15
Lead	mg/L	--	0.05	0.035
Magnesium	mg/L	--	--	12
Manganese	mg/L	--	0.2	0.35

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Mercury*	mg/L	--	0.002	ND
Molybdenum	mg/L	--	1	NA
Nickel	mg/L	--	0.2	0.016
Potassium	mg/L	--	--	6.7
Selenium	mg/L	--	0.05	0.015
Silver	mg/L	--	0.05	ND
Sodium	mg/L	--	--	470
Thallium	mg/L	--	--	0.00052
Uranium	mg/L	--	0.03	0.044
Vanadium	mg/L	--	--	0.035
Zinc	mg/L	--	10	0.12
Metals, Total				
Aluminum	mg/L	0.05	--	32
Antimony	mg/L	0.006	--	ND
Arsenic	mg/L	0.01	--	0.0056
Barium	mg/L	2	--	0.24
Beryllium	mg/L	0.004	--	0.0039
Cadmium	mg/L	0.005	--	0.00024
Calcium	mg/L	--	--	66
Chromium	mg/L	0.1	--	0.016
Cobalt	mg/L	--	--	0.0059
Copper	mg/L	1.3	--	0.056
Iron	mg/L	0.3	--	9.9
Lead	mg/L	0.015	--	0.036
Magnesium	mg/L	--	--	8.8
Manganese	mg/L	0.05	--	0.4
Mercury	mg/L	0.002	--	ND
Molybdenum	mg/L	--	--	NA
Nickel	mg/L	--	--	0.016
Potassium	mg/L	--	--	5.2
Selenium	mg/L	0.05	--	0.013
Silver	mg/L	0.1	--	ND
Sodium	mg/L	--	--	470
Thallium	mg/L	0.002	--	0.00043
Uranium	mg/L	0.03	--	0.043
Vanadium	mg/L	--	--	0.028
Zinc	mg/L	5	--	0.13
Wet/General Chemistry				
Alkalinity, Total as CaCO3	mg/L	--	--	320
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	200
Bromide	mg/L	--	--	0.38
Carbonate Alkalinity as CaCO3	mg/L	--	--	120
Chloride	mg/L	250	250	50
Fluoride	mg/L	2	1.6	0.68
Nitrate as N (Nitrogen)	mg/L	10	--	0.44
Nitrite as N	mg/L	1	--	ND
Orthophosphate	mg/L	--	--	ND
pH	pH Units	between 6.5 and 8.5	between 6 and 9	9.38
Sulfate	mg/L	250	600	610
Total Dissolved Solids	mg/L	500	1000	2100

Notes:

[a] The Gross Beta level of 50 (+/- 16) pCi/L measured by the laboratory was converted to 1.0 (+/- 0.42) millirem/year for comparison to the EPA MCL of 4 mrem/year

Primary Drinking Water Standard or Primary Maximum Contaminant Level (MCL)
Under the Safe Drinking Water Act, EPA has established health-based maximum contaminant levels (MCLs) for contaminants that may be present in drinking water and adversely affect public health. EPA Primary MCLs are the highest level or concentration of a contaminant allowed in drinking water of a public water system. They are enforceable standards that protect the users of a public water system. EPA does not regulate private drinking water wells.

Secondary Drinking Water Standard or Secondary MCL
EPA Secondary MCLs are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations such as taste, color and odor. These contaminants are not considered to present a risk to human health at the Secondary MCL. EPA does not enforce Secondary MCLs.

NM – Human Health Standards for Ground Water

NM – Other Standards for Domestic Water Supply

NM – Standards for Irrigation Use

2100 **Concentration Exceeds EPA and/or New Mexico Standard**

ND **Analyte Not Detected** [*An ND value means that the analyte was not detected above the laboratory Method Detection Limit (MDL). The MDLs are significantly below the EPA and New Mexico standards and, therefore, an ND indicates that if an analyte is present, it is at a very low concentration and well below the standard*]

NA **Not Analyzed/Not Applicable**

pCi/L **picocurries per Liter**

mrem/yr **millirem/year**

mg/L **milligrams per Liter**

Dissolved Metals – For metals analysis, the New Mexico WQCC ground water standards are based on analysis of water samples which have been filtered to remove colloidal particles (fine sediment particles) that are suspended in the water. By removing the suspended colloidal particles through filtration, the concentrations of metals detected in the filtered sample should be representative of the dissolved metals that are mobile in ground water.

Total Metals – The EPA drinking water standards (MCLs) are based on the total concentrations of metals analyzed in an unfiltered water sample. The unfiltered water sample will including those concentrations of metals adsorbed to the fine colloidal particles that are suspended in the water. EPA guidance for ground water sampling is to use a low-flow sampling technique without filtration for subsequent metals analysis. The low-flow sampling technique is to limit the amount of suspended colloidal particles in the collected sample. Under such conditions, the collected samples should be representative of the dissolved and particulate metals that are mobile in the ground water.